

FIG. 1

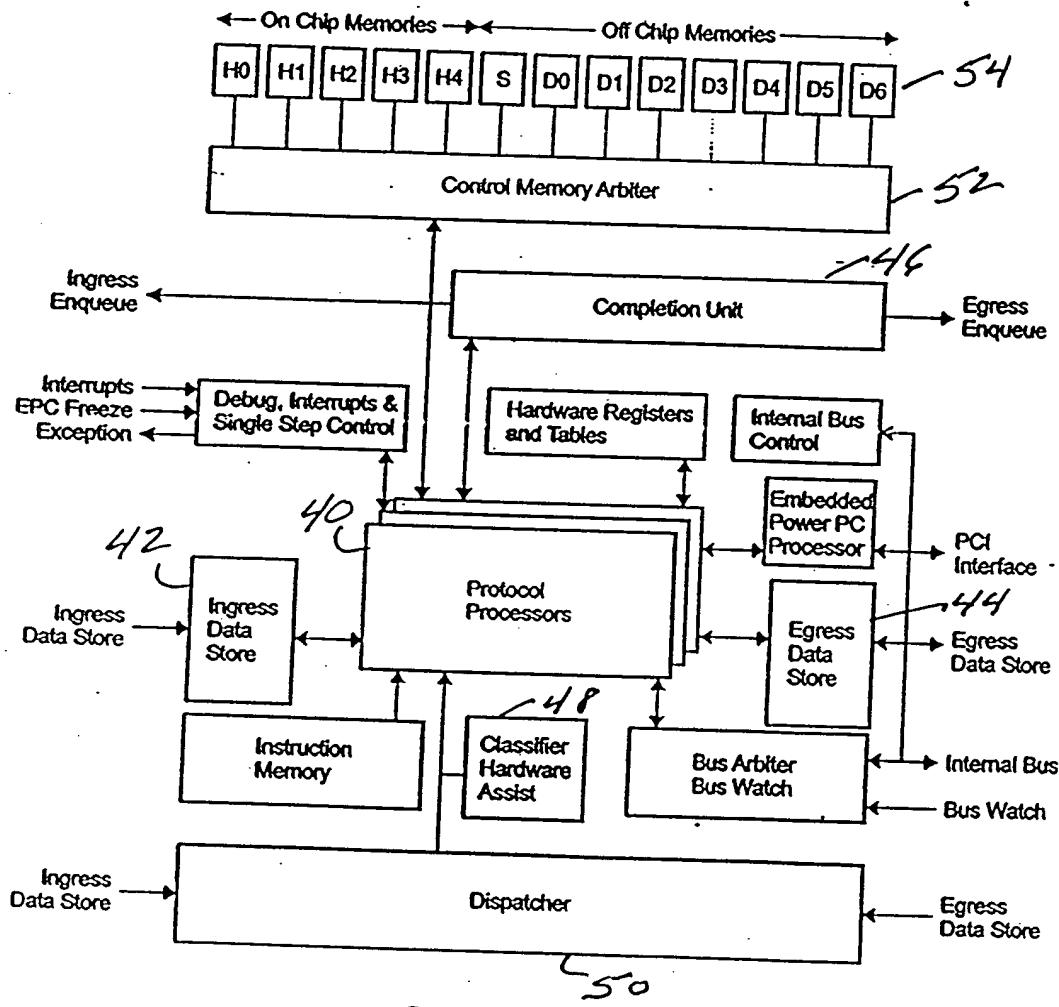


FIG. 2

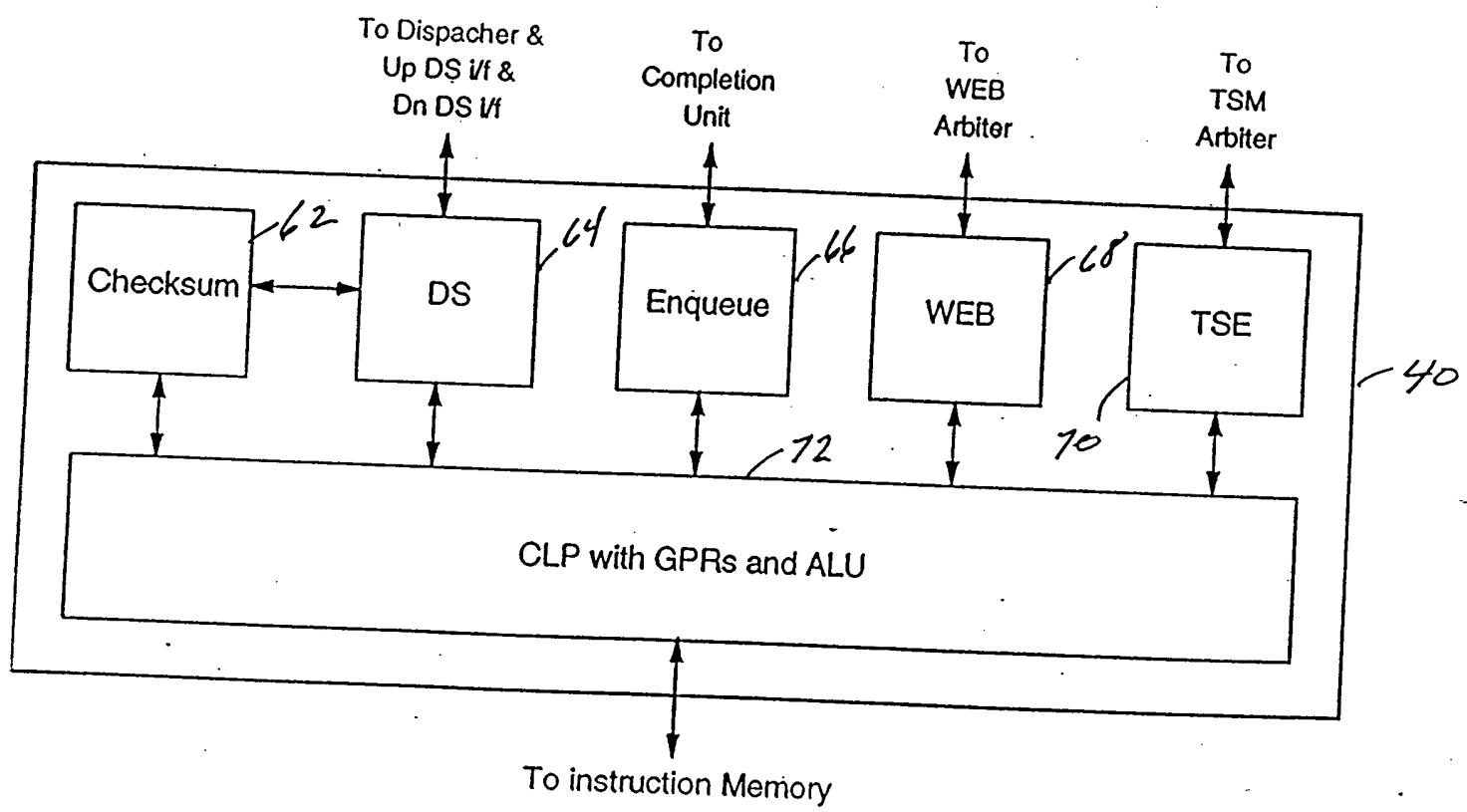


FIG. 3

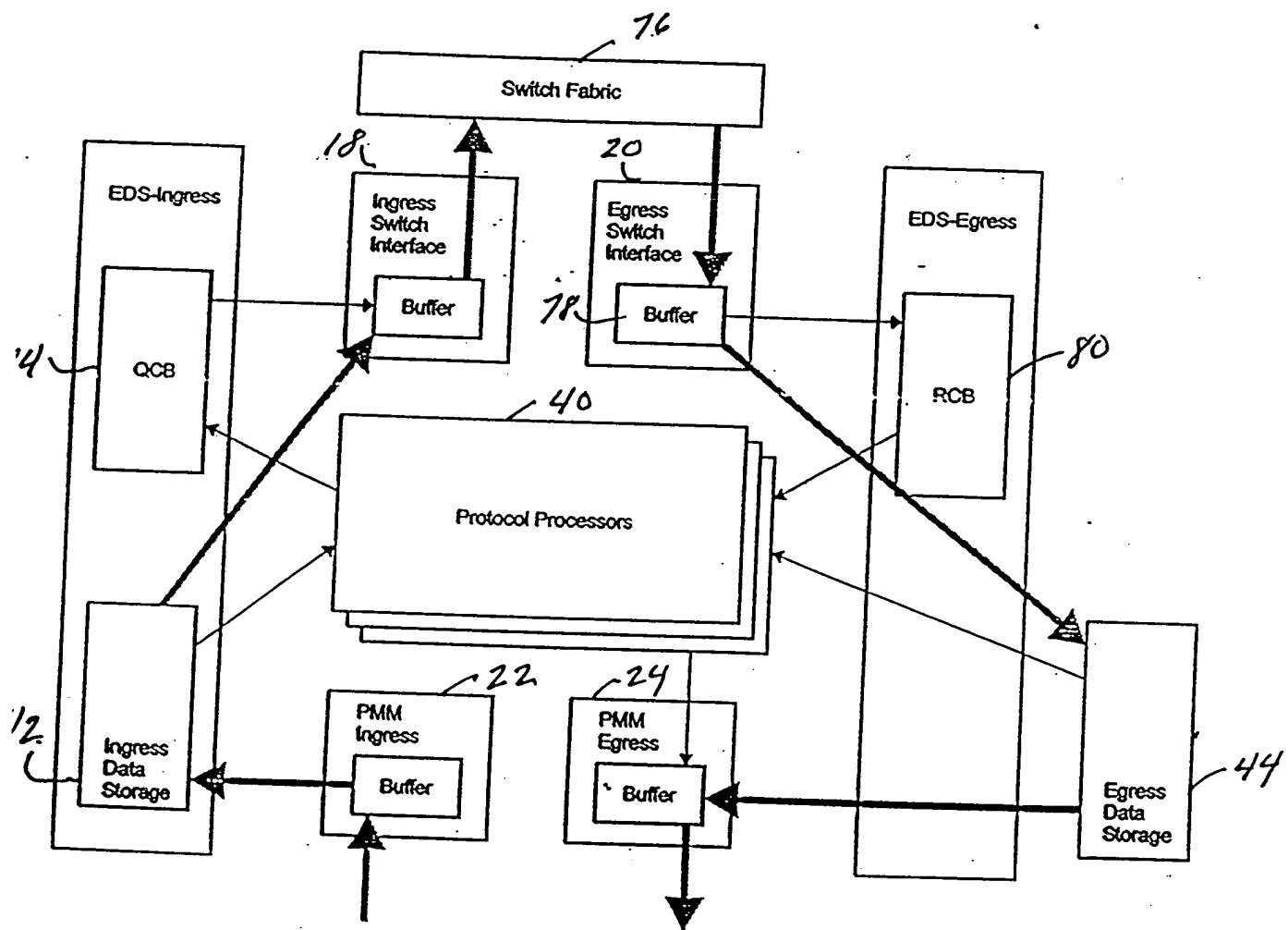


FIG. 4

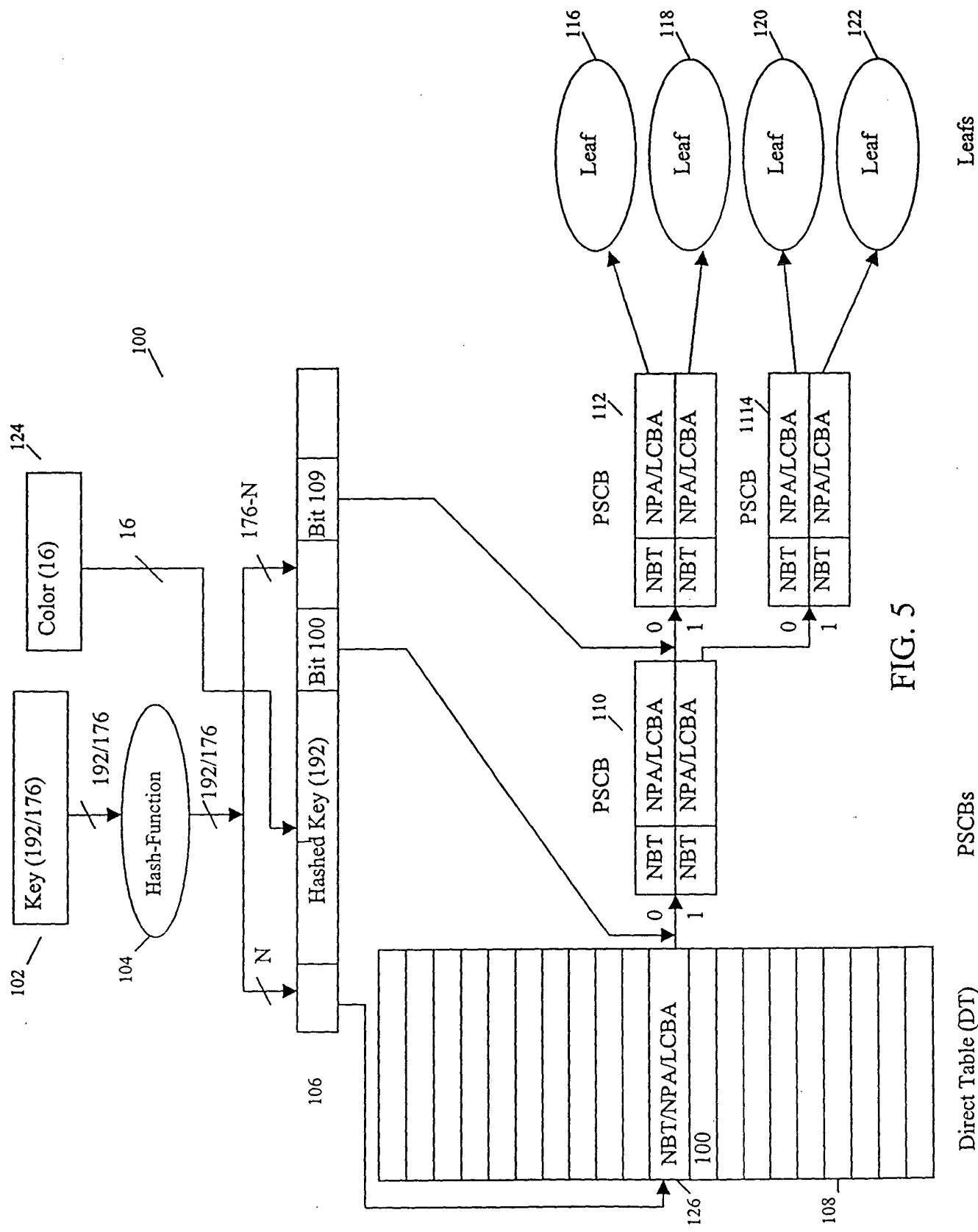
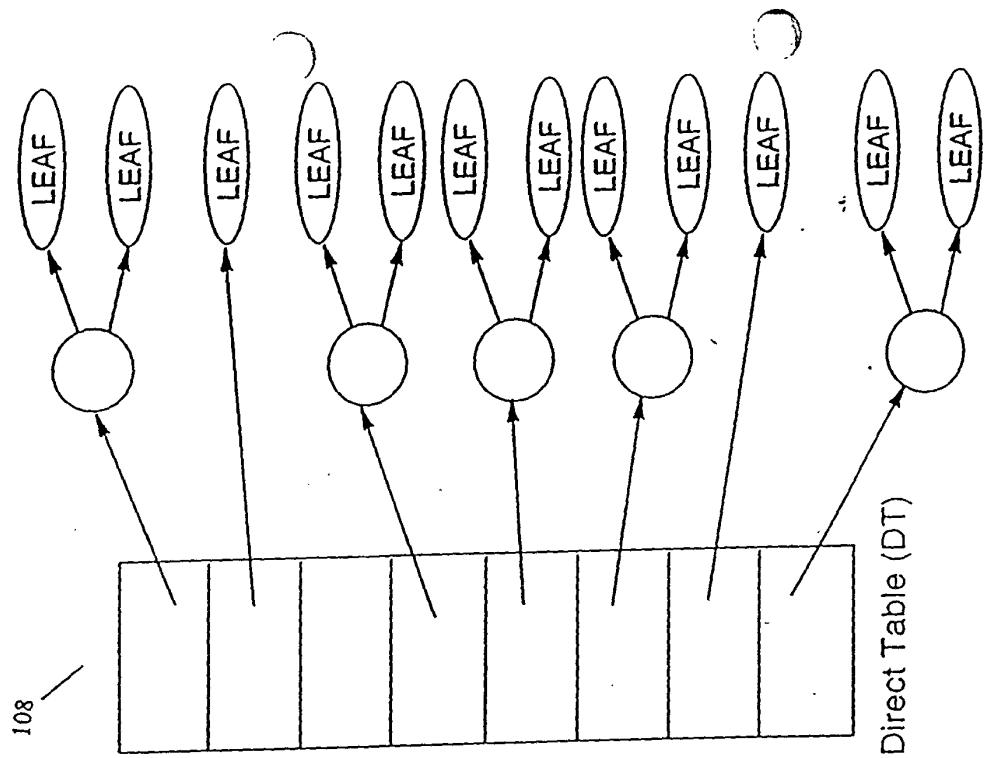


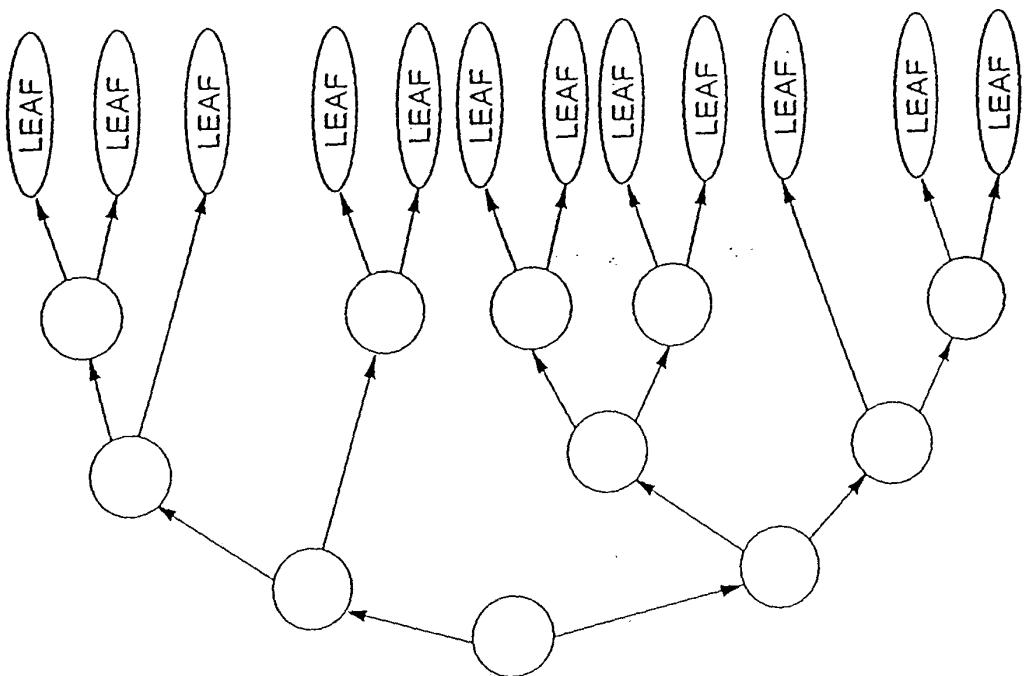
FIG. 5

Direct Table (DT)      PSCBs

Leafs



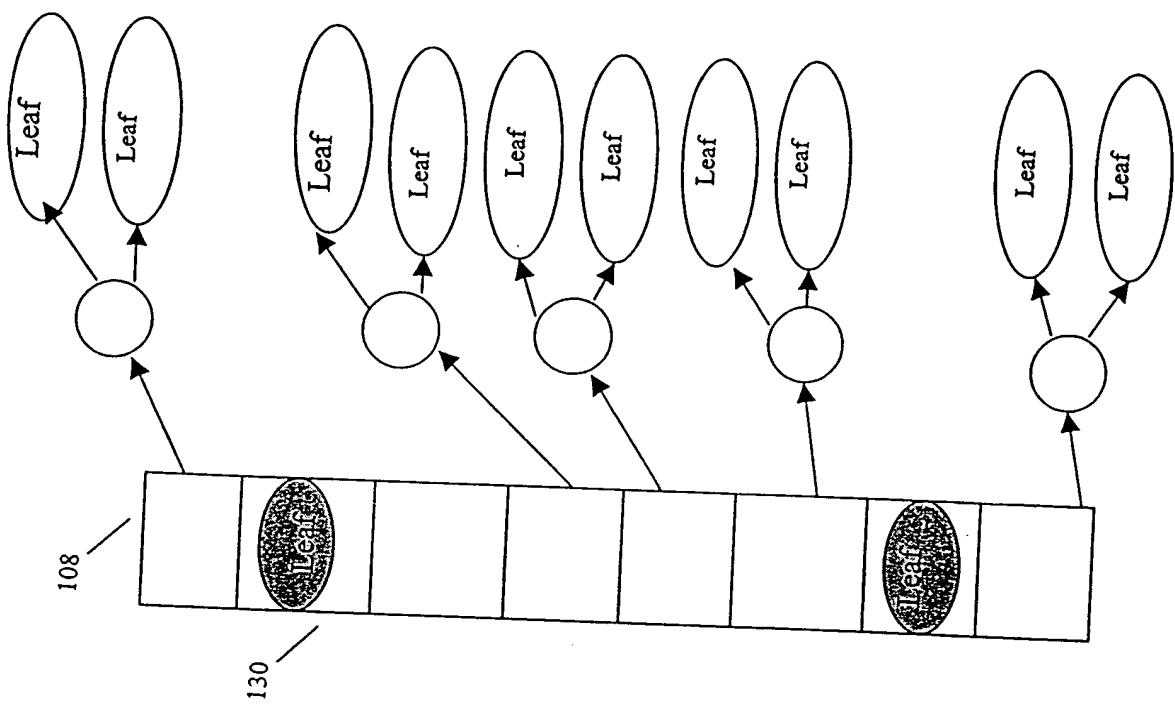
Datastructure with using a Direct Table



Datastructure without using a Direct Table

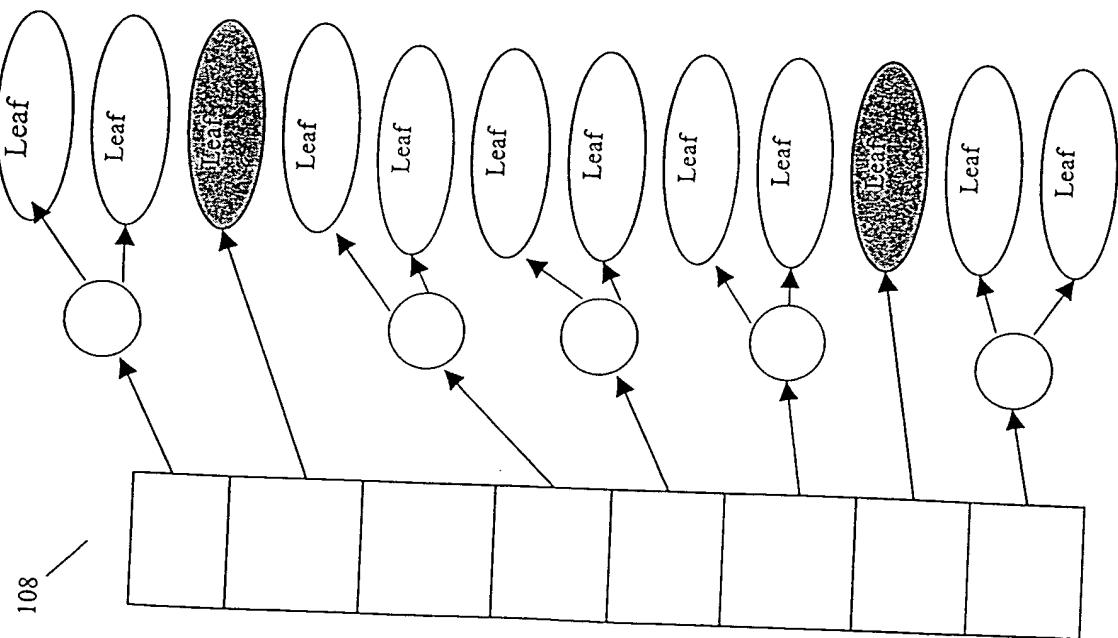
FIG. 6

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Datastructure with Direct Leaves

FIG. 7



Datastructure without Direct Leaves

Format	Conditions	Valid in DTEntry ?	Valid in PSCB?	Format (2bits)	NPA/LCBA (26 bits)	NBT (8 bits)
Empty DTEntry	No leaves	Yes	No	00	0	0
Pointer to next PSCB	DtEntry contains pointer	Yes	Yes	00	NPA	NBT
Pointer to leaf	Single leaf associated with DTEntry; LCBA field contains pointer	Yes	Yes	01	LCBA	0

Fig. 8

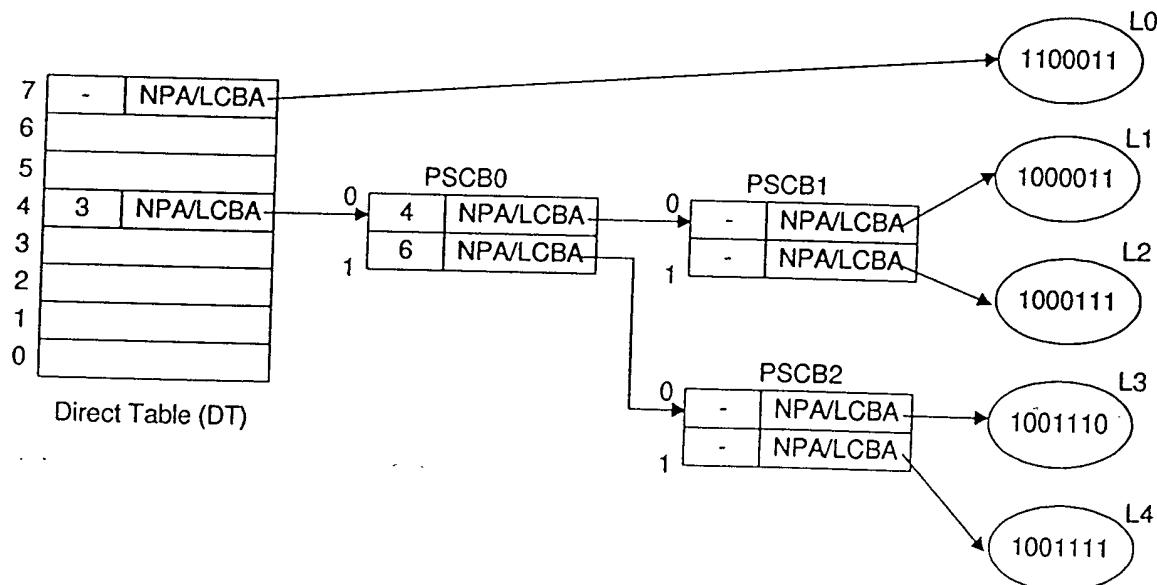


Fig. 9

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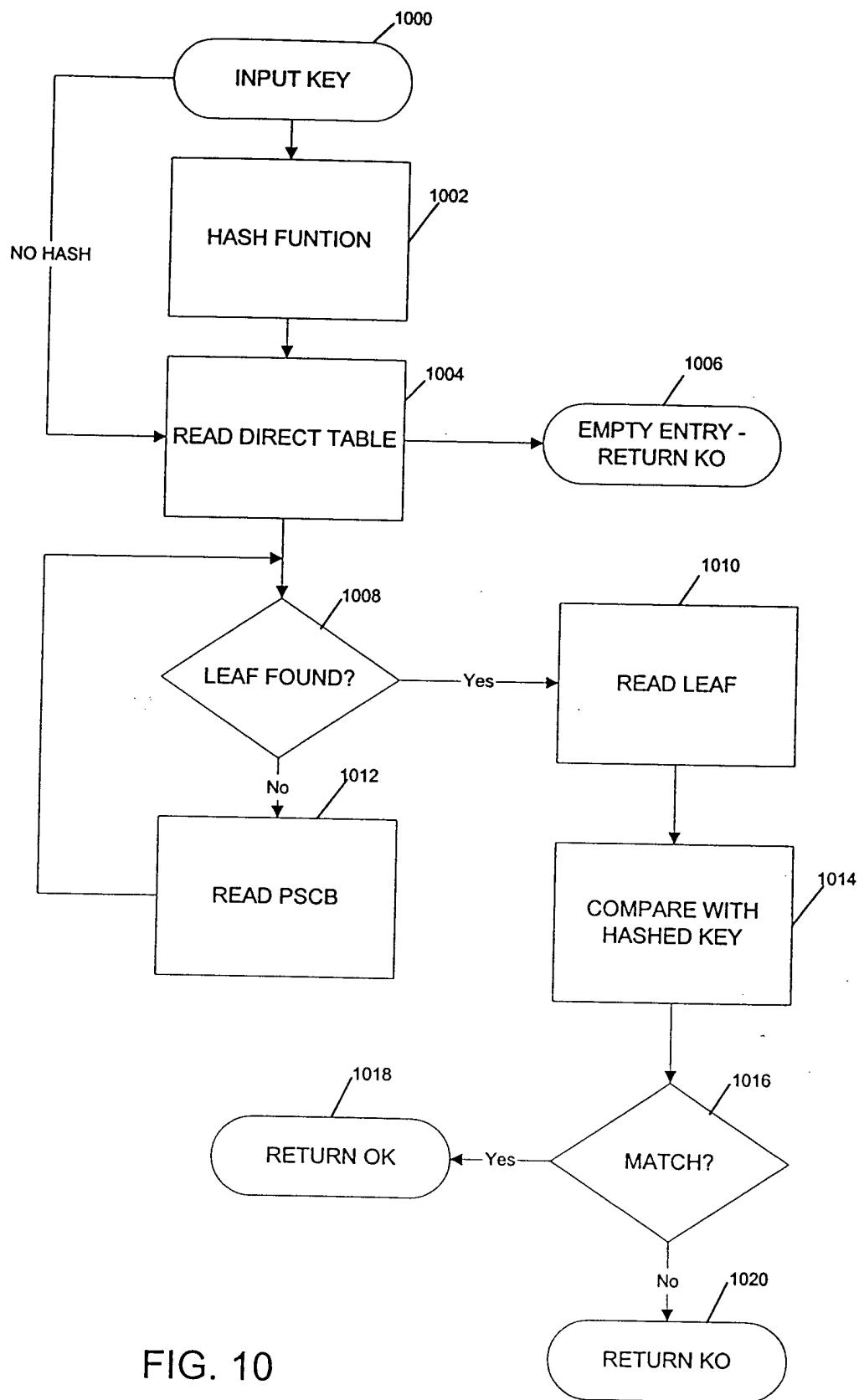


FIG. 10

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### LUDefTable Tree Definition

Field	Size	Bits
CacheEntry	1	0
Tree_Type	2	2..1
hash-type	4	6..3
color_en	1	7
PIP2_max_size	5	12 .. 8
NPARope_en	1	13
NPASMT_en	1	14
ComplIndex_en	1	15
PSCB_fq_index	6	21 .. 16
PSCB_Height	1	22
Mask_Vector_En	1	23
ComplIndex	8	31..24
DT_base_addr	26	57 .. 32
DT_size	4	61 .. 58
DT_interleaf	2	63 .. 62
Leaf_fq_index	6	69 .. 64
Leaf_Width	2	71 .. 70
Leaf_Height	3	74 .. 72
DirectLeafEn	1	75

FIG. 11

Field	Size	Address in TSM where PSCB is located
NPA0	26	Next PSCB address: pointer to next PSCB in the tree for 0-part of PSCB
NBT0	8	Next bit to test for 0-part of PSCB
LCBA0	26	Leaf control block address: pointer to leaf for 0-part of PSCB
NPA1	26	Next PSCB address: pointer to next PSCB in the tree for 1-part of PSCB
NBT1	8	Next bit to test for 1-part of PSCB
LCBA1	26	Leaf control block address: pointer to leaf for 1-part of PSCB
Index	8	Index of this PSCB (physically stored in the previous PSCB)
PatBit	1	The value of HashedKey[Index], based on the value of the Index field in the PSCB register

FIG. 12

Field Name	Length	Description
NLARope	4 bytes	Leaf chaining pointer, aging information and direct leaf information
Prefix_Len	1 byte	This field is not used by the TSE for FM trees and can be used by picocode
pattern	2 - 18 bytes	Pattern to be compared with the HashedKey
UserData	variable	The contents of this field is under complete picocode control; the UserData field can include one or more counters

FIG. 13

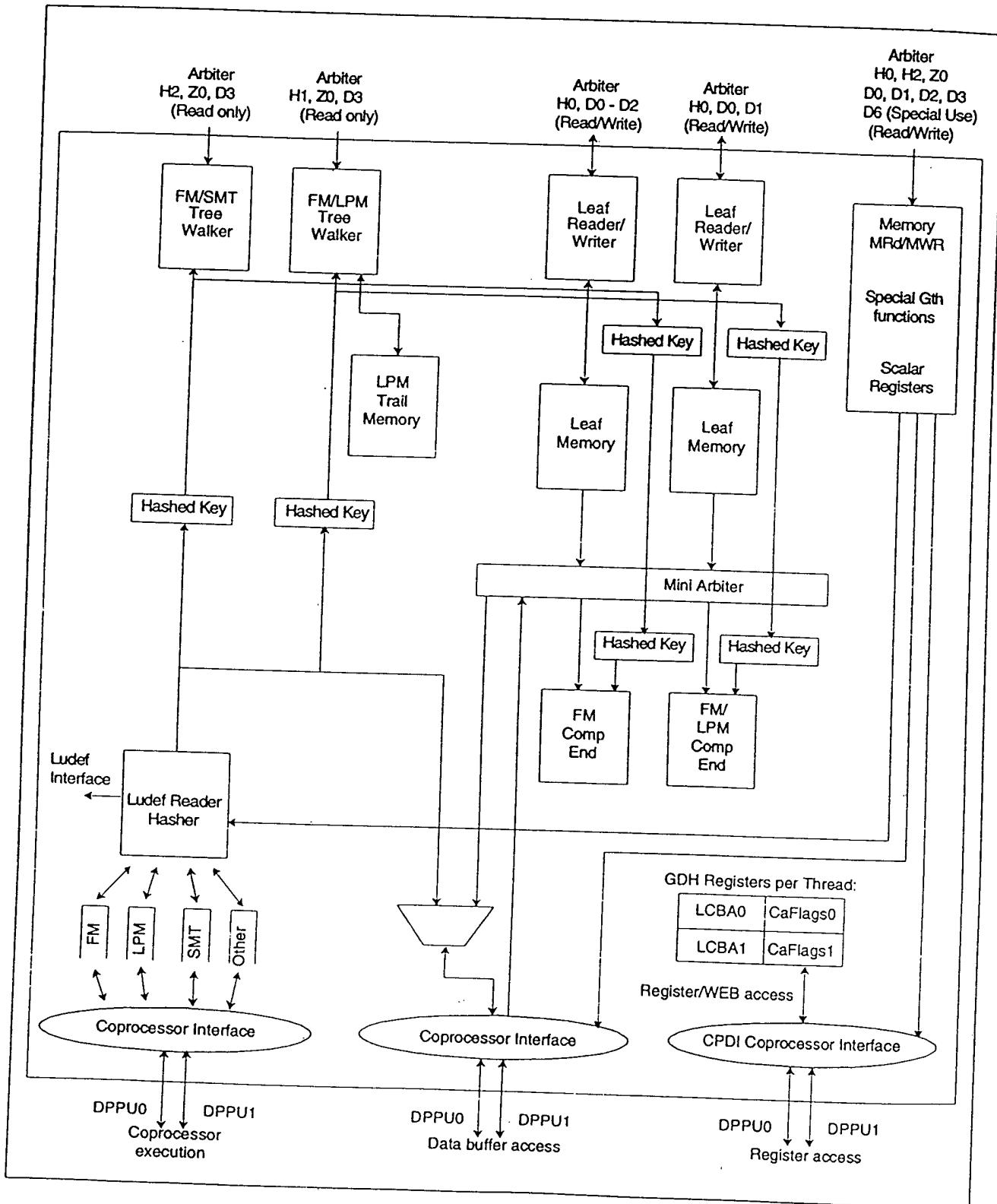


FIG. 14